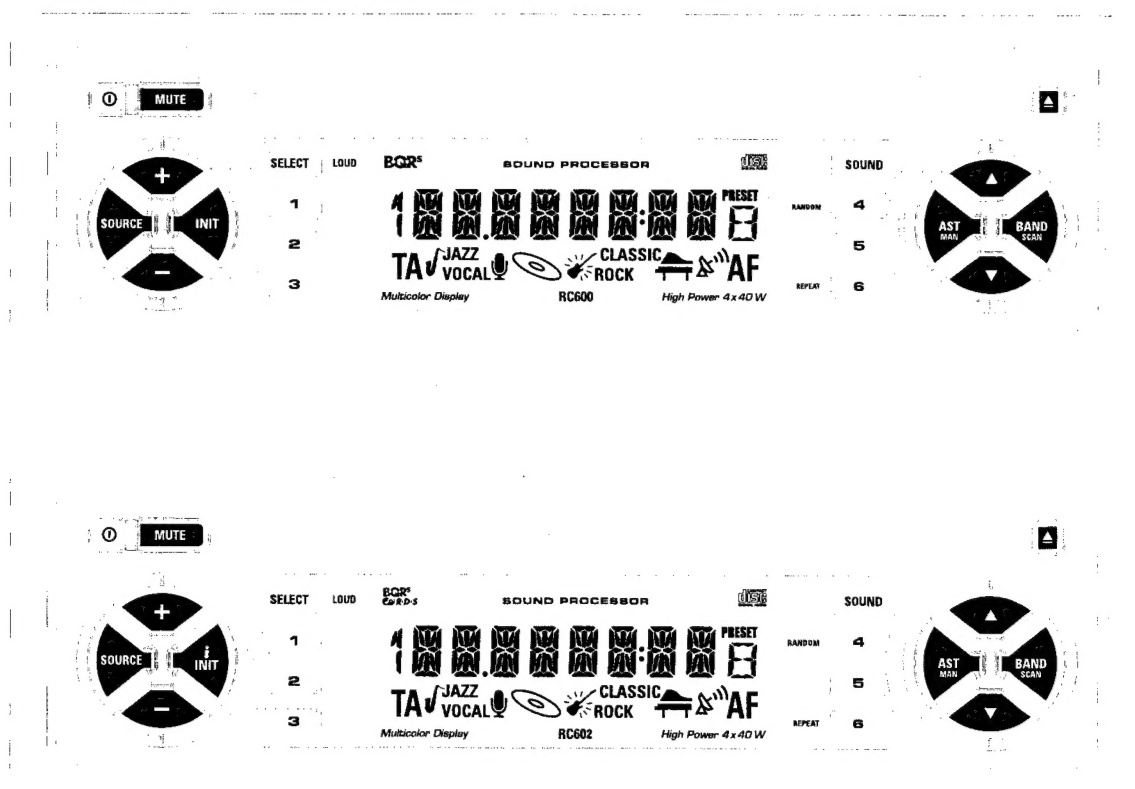


CD Car Radio 79RC600/00  
79RC600/10  
79RC602/00

# Service Manual

For repair information of the CD player see Service Manual of CD mechanism

12 V 



## Technical Specifications

### General

Power Supply	:	10.5 - 16V
Quiescent Current (at 12.6V)	:	<3.0mA
Fuse	:	10A

### Radio

#### TUNING RANGE IN DIFFERENT "INIT" MODE

INIT MODE	BAND	FREQUENCY	GRIDS MANUAL/AUTO
EUROPE	FM	87.5 - 108MHz	50kHz/100kHz
	MW	531 - 1629kHz	1kHz/9kHz step
AMERICA	FM	87.5 - 108MHz	100kHz/100kHz
LATAM	AM	530 - 1710kHz	1kHz/10kHz step
ASIA	FM	87.5 - 108MHz	50kHz/50kHz
	AM	531 - 1629kHz	1kHz/9kHz step

Aerial input impedance	:	75 ohm
IF-FM (1/2)	:	72.2MHz/10.7MHz
IF-AM(1/2)	:	10.7MHz/450kHz
- 3dB	:	7±3 V
SDS (10 dB channel separation)	:	140uV ± 3dB
Stereo channel separation	:	> 21dB
FM sensitivity for 26dB S/N	:	< 4.5 V
MW sensitivity for 26dB S/N	:	< 30 V

### CD player

CD mechanism	:	CDC01
Frequency response	:	20Hz - 20kHz
Crosstalk	:	45dB

### Amplifier

Output Power (D=10%)	:	4x16W ± 1dB/4
Fader	:	50dB
Balance	:	50dB

### ESD



#### WARNING

All IC's and many semiconductors are susceptible to electronic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected to the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

#### ESD Equipment:

Anti-static table mat	large 1200x650x1.25mm	4822 466 10953
	small 600x650x1.25mm	4822 466 10958
Anti-static wrist band		4822 395 10223
Connection box (1MΩ)		4822 320 11307
Extendible cable (to connect wrist band to conn. box)		4822 320 11305
Connecting cable (to connect table mat to conn. box)		4822 320 11306
Earth cable (to connect any product to mat or box)		4822 320 11308
Complete kit ESD3 (combining all above products)		4822 310 10671
Wristband tester		4822 344 13999

INSTALLATION

If your car is equipped with ISO connectors, simply insert them in connectors of car radio. If not, you can use an adaptor cable (Refer to the table on the separate installation card)

PREPARATION

Voltage and polarity: The set must be connected to a 12V car battery with negative terminal to earth (car chassis).

Warning: To prevent short-circuiting, disconnect the negative car battery terminal until the set has been mounted and connected. See separate installation card.

MOUNTING (Please refer to the Installation Card)

METAL SLEEVE

- Install the metal sleeve (dimension 182 x 53 mm) in the dashboard (Fig.5).
- Fix metal sleeve into place by pressing the metal tags outwards using a screwdriver(Fig.6).
- For optimal performance of the CD player, the metal sleeve should be mounted horizontally (between -10° and +30°). Consult your dealer for other mounting angle.

MOUNTING RADIO

This radio can be properly installed either from conventional Front Mounting or Rear Mounting

Front mounting(Fig.8)

- Slide the radio into the metal sleeve until the springs at either side of the radio snap into the openings of the sleeve.
- Finally reconnect the negative car battery terminal.

REMOVE RADIO (using the two U-brackets supplied)

- Insert both U-brackets into the holes on the front of the set until they lock.
- Pull out the radio .

REPLACING FUSE

- Use a 10A blade-type fuse .

SECURITY CODE (for selected model only)

CHECKING WHERE THE SECURITY CODE IS ACTIVE

If the security code is active, the display briefly shows 'CODE' each time the set is switched on

ACTIVATING THE SECURITY CODE

While keeping the ▲ key pressed, switch on the set. Keep the ▲ key pressed until the display shows 'CODE' and you hear a beep. The security code is now active.

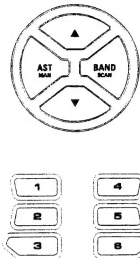
If the power supply has been interrupted...

If the Security code has been activated and the power supply has been interrupted, the set will mute and the display shows 'CODE'.

Enter the code as described in 'Entering the code'.

Entering the code (stated on the 'Security card', for example 4359):

Action	Display	CODE
-Switch on the set	0 - - -	
-Press the preset 1 key	4 - - -	
Enter the first figure of the code with the ▲ or ▼ keys	4 0 - -	
- Press the preset 1 key again	4 3 - -	
Enter the second figure of the code with the ▲ or ▼ keys	4 3 0 -	
- Press the preset 1 key again	4 3 5 -	
Enter the third figure of the code with the ▲ or ▼ keys	4 3 5 0	
- Press the preset 1 key again	4 3 5 9	
Enter the fourth figure of the code with the ▲ or ▼ keys		
- Press the preset 1 key once more.		



- If the correct code was entered, the set gives a beep and then will function normally.
- If an incorrect code was entered, the set give a error beep. The display shows 'WAIT'. This indicates that a waiting period has started.

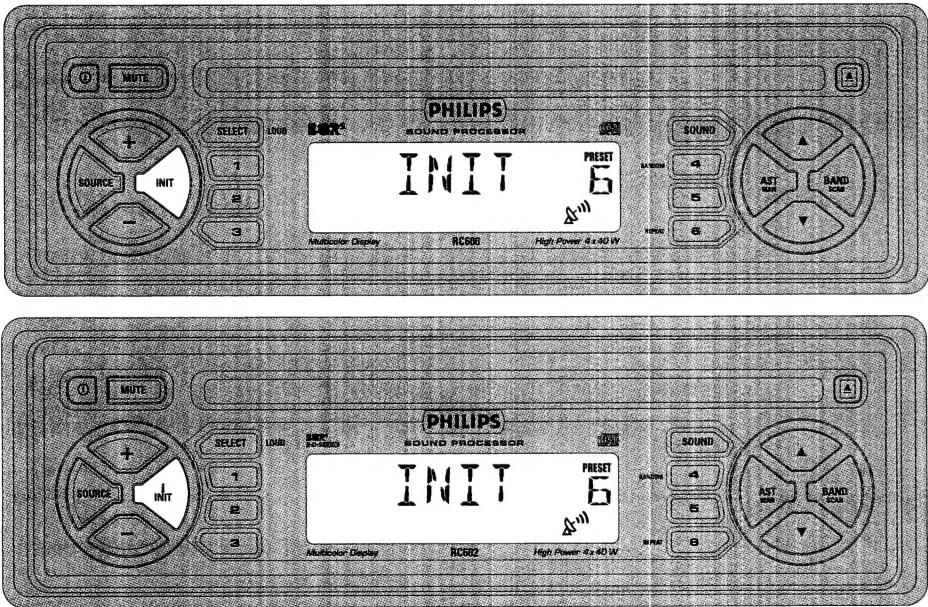
- Do not switch off the set when the display shows 'wait'! (The waiting period will start all over again when the set is switched on.)
  - You must wait until the display shows 'CODE'. This indicates that the waiting period has finished.
  - Enter the correct code as described in 'Entering the code'.
- The waiting period doubled each time an incorrect code is entered(1 minute, 2 minutes, 4 minutes, etc...)

Deactivating the Security Code

- While keeping the ▲ key pressed, switch on the set. Keep the ▲ key pressed until you hear a beep.
  - Enter the code as described in 'Entering the code'. You will hear two beeps indicating that the Security Code has been deactivated.
- If an incorrect code is entered you have to follow the same procedure as described in 'Entering the code'.

IF THE SET HAS TO BE SENT FOR REPAIR

- Deactivat the Security Code (as described above), or
- Write the Security Code on a label and attach it to the set. After repair, remove the label from the set.



INITIAL SETTINGS

It is possible to modify many of the set's initial settings according to your preferences.

Press the INIT key until you hear a beep to enter the initialisation mode. The display shows 'INIT'.

Briefly press ▲ or ▼ key to select the option you want to modify.

At your selected option, press 'AST' key to change the setting.

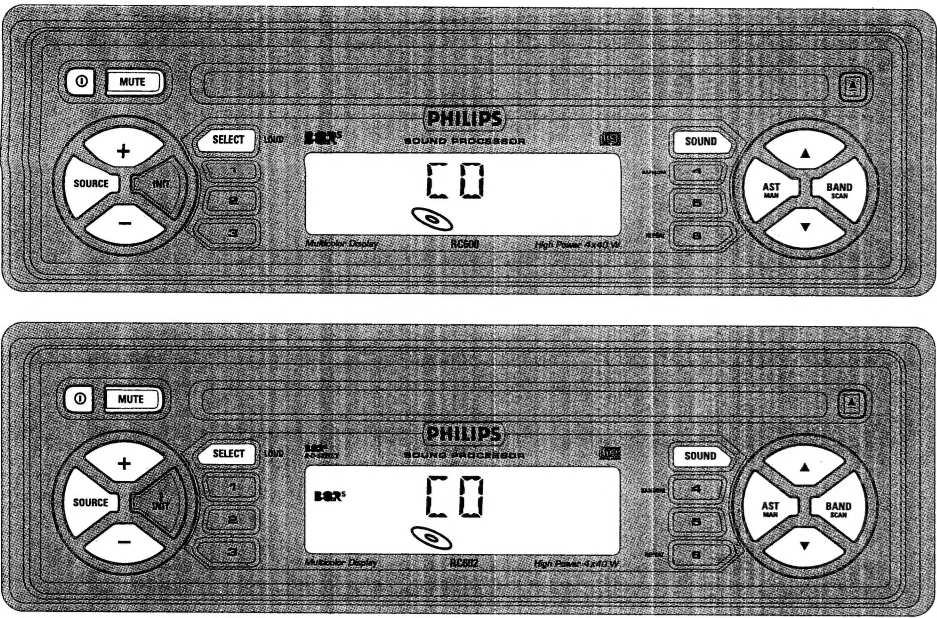
The choice shown on the display will be memorized by the set when you select another option or leave the initialisation mode.

Press INIT key until you hear a beep to leave the initialisation mode.

Note: The set automatically leaves the initialisation mode about 1 minute after your last operation.

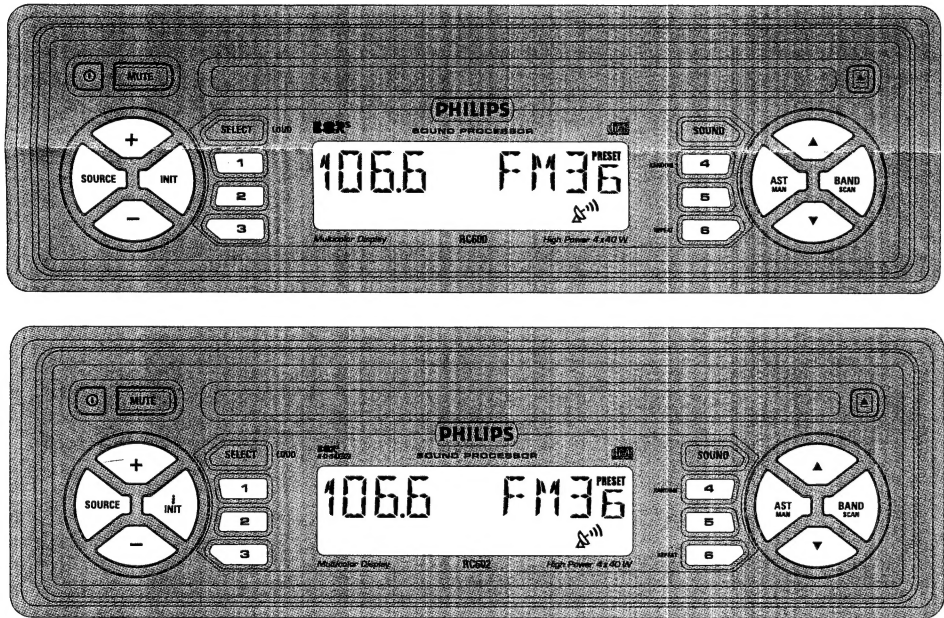
Option	Choice	Usage
(▲ or ▼)	(AST)	
Time	[OFF, 12H, 24H]	Select the desired clock format (See 'SETTING THE CLOCK').
BLEEP	[-2,-1,0,+1,-2]	Select volume level of confirmation beeps
LOGI	[OFF, ON]	Select 'ON' if you want to be able to use the set even when the car ignition is switched off. The 'on/off logic' feature enables use of the set (for one hour) even when you have removed the car ignition key.
LED	[OFF, ON]	No effect for this set without detachble front.
LOUD	[LOW, MID, HI]	Select the level of loudness control.
CD	[-2, -1,0,+1,+2]	Volume level of CD relative to tuner.
TA	[-2,-1,0,+1,+2]	Select volume level of Traffic Announcements on FM.
SRCH	[DX, LO]	Select 'LO' if you wish to search only for strong stations during automatic tuning to a frequency
AF	[ON, OFF]	Select 'ON' to activate the Alternative Frequency function
RADIO	[EUROPE, AMERICA, LATAM, ASIA]	Select the tuner according to Europe, Latin America, America or Asia standard.
AM	[OFF, ON]	Select 'OFF' to suppress AM if not in use (only applicable when RADIO is in Latin America, America or Asia standard.)

**Note:** References volume can be preset by the volume up or down keys during the Initialisation mode.  
\* Some items in the list above will appear for selected model only.



AUDIO ADJUSTMENT

- Power:** Press POWER key to switch the set on or off.
- Volume:** Press + key or - key to adjust the volume. Please make sure you can still hear the traffic (horns, sirens .....).
- SOUND:** Choose one of the pre-defined sound styles with the SOUND key.
  - BASS-TRE:** Your own settings of bass and treble.
  - FLAT:** Mid-positions of bass and treble.
  - JAZZ :** Jazz music.
  - VOCAL:** Speech.
  - CLASSIC:** Classical music.
  - ROCK:** Rock music.
- SELECT:** Choose the desired audio mode with SELECT key.
  - B ASS (low notes), TREBLE (high notes), BALANCE (left-right), FADER (front-rear).
  - Press + key or - key to adjust the selected mode.
  - Adjustment of Bass and treble settings only applicable when 'BASS-TRE' is selected as the sound style.
- Note:** After 5 seconds the display goes back to the last mode of operation.



RADIO

- WAVEBAND**
  - Briefly press B AND key to select the desired waveband.
  - The display shows: FM1, FM2, or FM3, AM1 or AM2. (When the choice is set to 'LATAM' or 'AMERICA' or 'ASIA' under 'RADIO' option; see INITIAL SETTINGS).
- SEARCHING TUNING**
  - Use search tuning to quickly search for a station.
  - Briefly press ▲ or ▼ key.
  - You will receive a station after a short time.
  - To search for another station, press the key again.
- MANUAL TUNING (If you know the frequency of the required station)**
  - Press MANU AL key for at least 2 seconds (until you hear a beep), to switch from search tuning to manual tuning.
  - Tune to the desired frequency with ▲ or ▼ key (keeping the key pressed changes the frequency quickly)
    - ▲ higher frequency
    - ▼ lower frequency
- Note:** The radio automatically switches back to search tuning after about 50 seconds with a beep.

**LOUD:** Press LOUD key at least 2 seconds (until you hear a beep) to switch loudness on or off. To reinforce bass and treble especially when listening at a low volume level.

**MUTE:** Press the MUTE key to mute the sound momentarily. Press MUTE key again to restore the volume level.

**SOURCE:** Press the SOURCE key to select the desired source. The display shows: RADIO or CD.

- SETTING THE CLOCK**
  - Press INIT key for at least 2 seconds (until you hear a beep) to enter the Initialisation mode.
  - Display shows 'INIT'.
  - Press ▲ or ▼ to select TIME.
  - Press AST key to select 12H or 24H.
  - Press ▲ key:
  - Display shows: e.g. '00:00' (24 hour format) / 'AM 12:00' (12 hour format).
  - Hour digit start flashing.
  - Press the AST key to adjust the hour setting, same for minute.
  - Press the ▲ key to switch to minute setting, and press ▼ key to return to hour setting.
  - Press INIT key until you hear a beep to leave the initialisation mode except in INIT mode.
  - 10 seconds after any key operations, the display will always show time when clock mode is activated

Useful tips

- Set functions but no sound.
- Adjust the volume of the set.
- Adjust Fader settings.
- Display shows 'TOO HOT' and the sound from the speaker is reduced.
- A built-in safety circuit prevents the temperature in the set from exceeding a certain level.
- Wait until 'TOO HOT' disappears from the display before increasing the volume.

PRESET KEYS 1-6 (STORE AND PRESET)

Six stations per waveband can be stored and recalled using the preset keys (1 to 6).

- STORING A STATION**
  - Briefly press B AND key to select the desired waveband.
  - Tune in the desired station frequency.
  - Press the desired preset key (1 to 6) for at least 2 seconds (until you hear a beep).
  - Note: A previously-stored station is automatically erased if a new frequency and preset number.
- RECALLING A STATION**
  - Briefly press the B AND key to select the desired waveband.
  - The display will show the band, frequency and preset number.
- AUTO STORE (AST)**
  - You can automatically store 6 FM stations on FM3 band or 6 Am(mw) stations on AM2 (MW2) band by using AUTOSTORE (AST) function. When you use Auto Store, the new station replaces any previously stored in the FM3 band or the Am2(mw2) band.
- AUTOMATICALLY STORE A STATION**
  - Briefly press the B AND key to select the desired FM or AM band.
  - Briefly press AST key, you will hear a beep.
  - The set mutes and display shows 'FM3 AST' or 'MW2 AST' or 'AM2 AST'.
  - You will hear a beep when it has finished storing 6 stations.
  - You will hear the station on preset 1.
  - Sometimes it may not be possible to find six stations. In this case, the remaining presets are programmed with 0000 (radio mute). If no stations are found, the previously stored stations are maintained.
- FREQUENCY SCAN**
  - The scan function gives you a quick impression of all the stations which can be received on the current waveband. You hear each station in turn for about 10 seconds.
  - Press SCAN key for at least 2 seconds to switch SCAN function on or off.



## RADIO DATA SYSTEM (RDS) ON FM (for selected model only)

Many FM stations broadcast RDS information.  
This car radio uses the RDS information to offer you many advantages, including:

### DISPLAY OF STATION NAME

The set displays the name of the station instead of its frequency.

### AUTOMATIC RETUNING

The set continuously check a list of Alternative Frequencies (AF) for the tuned radio station and automatically selects the best frequency.

### USEFUL TIPS

Display shows frequency (not station name).  
Set is tuned to non-RDS station.  
Radio switches to another station while driving through different reception areas of different transmitters . See INITIAL SETTINGS; select Option 'AF' and set the Choice to 'ON'.

### DISPLAY OF PROGRAMME TYPE (PTY)

If an RDS station is stored on a preset, you can check the type of programme being transmitted.  
Briefly press the relevant Preset to see the programme type (if transmitted).

### INFORMATION FROM RELATED RADIO STATIONS

Enhanced Other Network (EON) is an RDS service where the broadcaster links some station together. If you tuned to a station where is linked to others by EON, the set is capable of receiving Traffic-Announcements (and / or News bulletins ) from both the tuned station and related stations.

### ALARM MESSAGES (PTY Alarm)

This set automatically receives emergency messages made by the broadcaster .  
- During the messages the display shows 'ALARM' and the station-name alternately.

### TRAFFIC ANNOUNCEMENTS

You can switch on the TA mode to give priority to Traffic Announcements (even if you play a CD or mute the set ).  
You will hear the Traffic Announcements when broadcast, if you switch on the TA mode .  
- If the tuned station does not enable the reception of Traffic Announcements, the display shows 'NO T A'. The radio automatically searches an appropriate station .

### USEFUL TIPS

Display shows 'NO TA', and set beeps at intervals .  
The tuned station becomes too weak to enable the reception of Traffic Announcements Use search tuning to find another station.  
If TA mode is switched on, search tuning only select stations which enable the reception of Traffic Announcements .

## NEWS BULLETINS

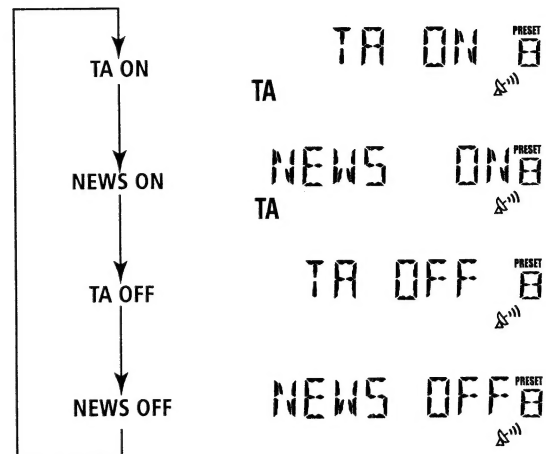
You can switch on the NEWS mode to give priority to News bulletins (even if you play a CD or mute the set). NEWS is not yet implemented in all countries.

Note: News bulletins may be interrupted by Traffic Announcements (if the TA mode is switched on )

### Activate the desired TA or NEWS mode.

Select a FM band with BAND key .

Briefly press the i key to select the desired RDS mode. When you briefly press the i key, the mode and display changes cyclically as follows :

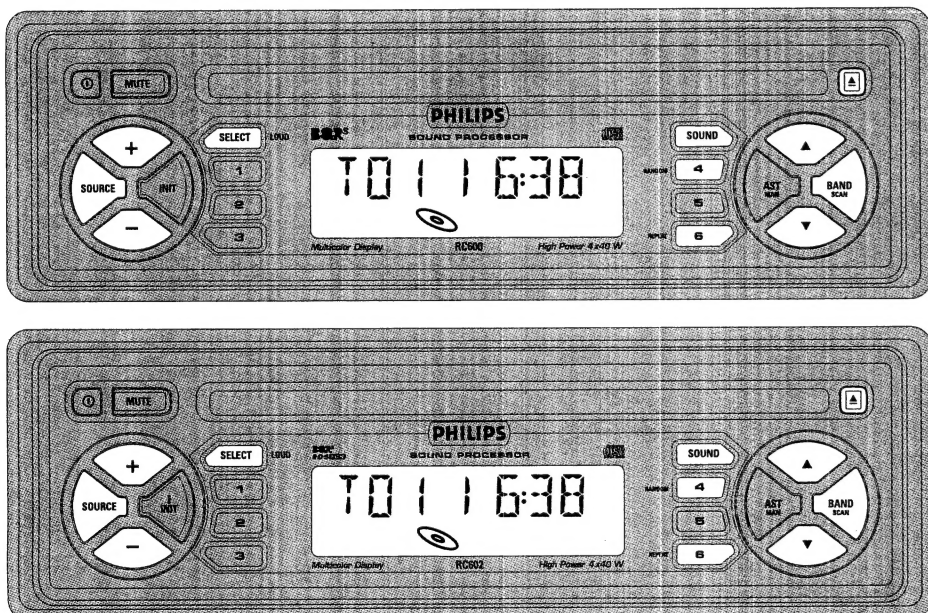


### Interrupting Traffic Announcement / News mode

If you do not wish to continue listening to a particular Traffic Announcement or News mode, you can interrupt it without switching off the mode .

Briefly press the i key.

- The set will return to the previous operating mode.



## CD PLAYER

This CD player is suitable for 8cm & 12cm disc.

### CD PLAYER

Slide the disc (with the label facing upwards) into the slot, or  
If a disc is already inserted: Briefly press the SOURCE key to select CD as the source.  
- The display shows the track number, elapsed playing time during playback.

### PREVIOUS/NEXT TRACK

Briefly press the ▲ or ▼ buttons to select the desired track.  
Playback resumes starting from the chosen track.  
- The display shows the selected track number and elapsed playing time.

### FAST BACKWARD/FORWARD

Press and hold ▲ or ▼ buttons to move quickly to another part of the disc during playback. Playback resumes when ▲ or ▼ is released.

### TRACK SCAN

Press SCAN key during playback to hear the first 10 seconds of each track.  
Press the SCAN key again to resume normal playback.

### RANDOM TRACK PLAYBACK

Press RANDOM key during playback to play the track on the disc in random order.  
Press the RANDOM key again to resume normal playback.

### REPEAT TRACK

Press REPEAT key during playback to repeat the current track.  
Press the REPEAT key again to resume normal playback.

### DISC EJECT

Briefly press ▲ to eject the disc from the player.  
If the disc is not removed within 15 seconds, the player will reload the disc.

### Useful tips

Display shows 'CD ERROR'.  
- The disc is dirty or inserted upside down.  
Display shows 'NO CD'.  
- No disc is inserted in the set.

### CARE OF DISCS

Avoid making fingerprints on the disc.  
After ejecting the disc, put it back into the disc box to prevent it from damage and dust.  
Never expose disc to heat or direct sunlight.

## NOTES

### CHECK BEFORE REQUESTING SERVICE

There may be times when you suspect that your car radio is not functioning as you expect it to. Before calling for service please read the operating/installing instruction and check the following list, you may find that an apparent malfunction can easily be rectified.

SYMPTOMS	POSSIBLE CA	USE / REMEDY
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#### General

Set does not function, no display	check fuse and connections.
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Set functions but with no or poor sound	Adjust volume of set to demute set, Check fader and balance settings, Check the aerial and its connection.
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Set front feels warm	Some heat is alw	ays generated by the set.
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The sound from the speaker is reduced	A built-in safety circuit prevents the tempera ture in the set from exceeding a certain level. Wait until 'TOO HOT' does not appear on the display when increasing the volume
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#### RADIO

Poor radio reception	Check that the aerial is fully extended and properly connected, Check that the negative terminal is connected to earth (car -chassis).
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#### CD

Display shows 'NO CD' or 'CD ERROR'	No CD inserted, or CD inserted upside-down or damaged or dirty or of the wrong type
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Distorted sound during playback	CD damaged or dirty.
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If you still have to send your set for service, always send the complete set.  
Do not try to open the set to service it yourself

